ORDER NO.HAD8803078C9

Service Manual

Equalizer

SH-8058

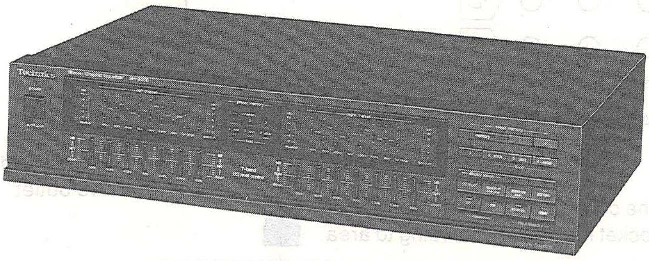
Stereo Graphic Equalizer

Color

(S) ....Silver Type	
(K) ....Black Type	

Area

Color	Area
(S)(K)	(EX) ....Continental Europe.
(S)(K)	(Ei) ....Italy.
(S)(K)	(EG)...........F.R.Germany.
(S)(K)	(EB)...........Belgium.
(S)(K)	(EK) ....United Kingdom.
(S)(K)	(EF) ....France.
(S)(K)	(EH)...........Holland.
(S)(K)	(XL) ....Australia.
(S)(K)	(XA)...........Asia,Latin America,Middle Near East,Africa and Oceania.
(S)(K)	(PA)...........Far East PX.
(S)(K)	(PE)...........European Millitary.
(S)(K)	(XB)...........Saudi Arabia.



SPECIFICATIONS (DIN 45 500)

Frequency response (center position)	5 Hz ~ 100 kHz, -3 dB
Maximum output voltage	8 V (1 kHz, THD 0.03%)
Rated output voltage	1 V
Rated total harmonic distortion	0.005% (20 Hz ~ 20 kHz) 0.003% (1 kHz)
Input sensitivity	1 V
Signal-to-noise ratio	107 dB (IHF'A) 100 dB (DIN)
Maximum input voltage	8 V (1 kHz)
Input impedance	47 kΩ
Gain	0±1 dB
Band level controls	+12 dB ~ -12 dB (7 frequency ranges, in 2 dB steps)
Center frequency	63 Hz, 160 Hz, 400 Hz, 1 kHz 2.5 kHz, 6.3 kHz, 16 kHz
Channel separation 1 kHz	60 dB (DIN)
Channel balance 250 Hz ~ 6300 Hz	± 0.5 dB (DIN)

GENERAL

Power supply	
For Continenta Europe	AC 220 V,50 Hz/60 Hz
For United Kingdom and Austraria	AC 240 V,50 Hz/60 Hz
For others	AC 110 V ~ 127 V/220 V ~ 240 V, 50 Hz/60 Hz
Power consumption	11 W (With power switch off : 6 W)
Dimensions (W x H x D)	430 X 102.6 X 229mm (16-1/16" x 4-1/16" x 9-1/32")
Weight	2.8 kg (6.2 lb.)

Specifications are subject to change without notice for further improvement. Weight and dimensions are approximate.

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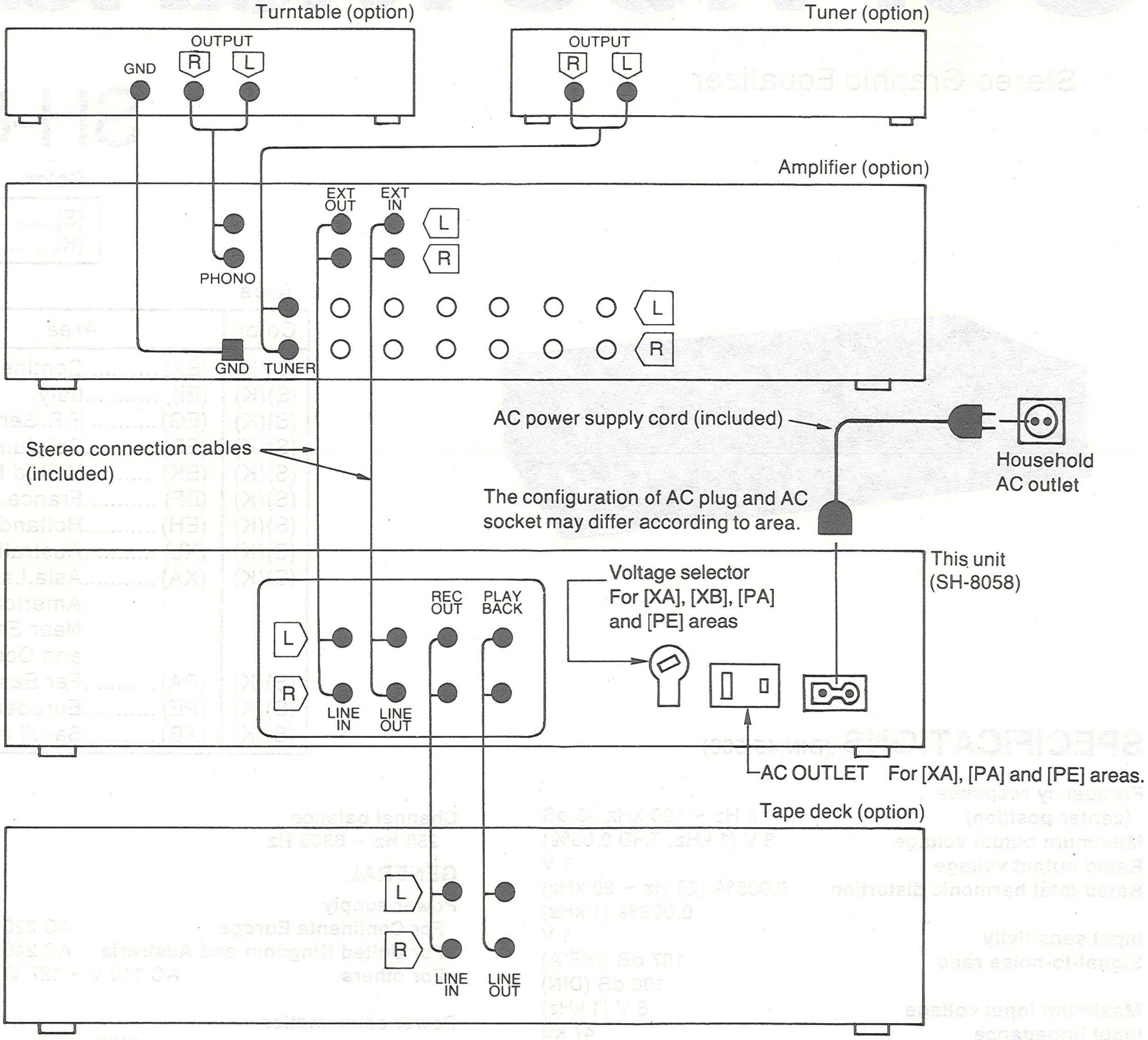
Technics

■ CONNECTIONS

Note:
When making the connections below in order to prepare the timer for a timer recording of a radio broadcast, be sure to make the settings so that the power of this unit will also be switched ON.

Connection to the external input/output (EXT IN/EXT OUT) terminals of an amplifier.

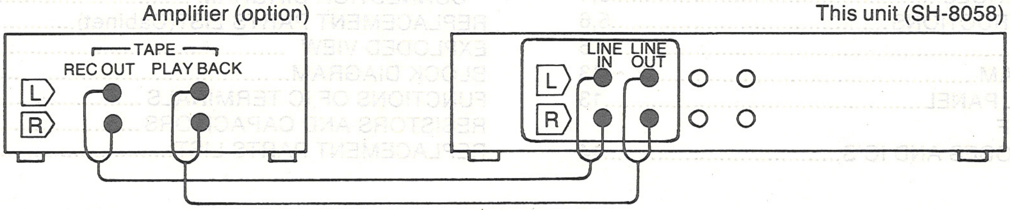

Turntable (option)
OUTPUT
GND
R
L
Tuner (option)
OUTPUT
R
L
Amplifier (option)
EXT OUT
EXT IN
L
R
PHONO
L
R
GND
TUNER
AC power supply cord (included)
Household AC outlet
Stereo connection cables (included)
This unit (SH-8058)
Voltage selector For [XA], [XB], [PA] and [PE] areas
REC OUT
PLAY BACK
L
R
LINE IN
LINE OUT
AC OUTLET For [XA], [PA] and [PE] areas.
Tape deck (option)
L
R
LINE IN
LINE OUT

The configuration of AC plug and AC socket may differ according to area.

Power cord plug...
Leave the power cord plug of this unit connected to an electrical outlet even when the unit is switched standby if you are listening to discs or a radio broadcast, etc.
See "Power-through" function on page 3.

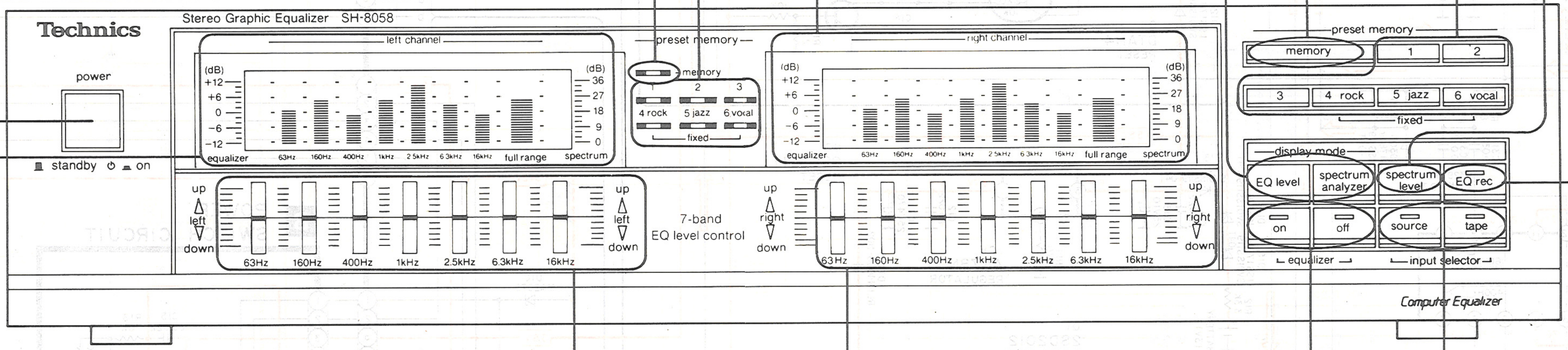
Connection to the TAPE terminals of an amplifier.

The connections between the amplifier and this unit change to those shown in the figure below, but other connections are the same as those shown in the figure above.


Amplifier (option)
TAPE
REC OUT
PLAY BACK
L
R
This unit (SH-8058)
LINE IN
LINE OUT
L
R

Note that the way the input and output cords are routed (for example, if they are tangled with the power cord) could cause a hum to be emitted.

■ LOCATION OF CONTROLS


Technics
Stereo Graphic Equalizer SH-8058
power
standby ⏻ ▂ on
left channel
(dB)
+12
+6
0
−6
−12
equalizer
63Hz 160Hz 400Hz 1kHz 2.5kHz 6.3kHz 16kHz full range
spectrum
36
27
18
9
0
preset memory
memory
4 rock
5 jazz
6 vocal
fixed
right channel
up
left
down
7-band
EQ level control
right
memory
1
2
3
fixed
display mode
EQ level
spectrum analyzer
spectrum level
EQ rec
on
off
source
tape
equalizer
input selector
Computer Equalizer

●Power "standby ⏻ • on" switch
This switch turns on and to standby the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the "⏻" (▂ █) position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet:

Note:

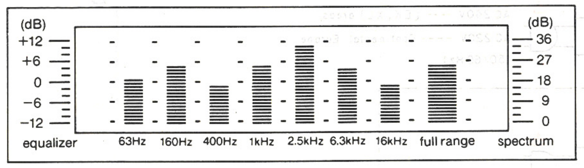
●For this unit, even if this switch is switched to the "standby" position, there is still a slight power consumption of about 6 watts; this is in order to assure the retention of the "most recent" memory and the preset-memory functions.

"Power-through" function

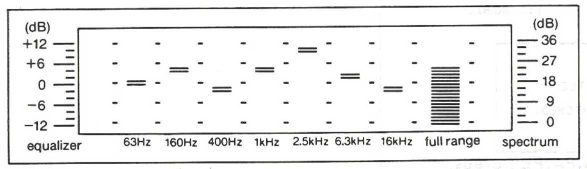
Discs, radio broadcasts, etc. can be heard even if the power of this unit is switched to standby.
When using this feature, set the amplifier's selector to the source you want to hear, and, before switching "standby" this unit, press either the input selector buttons marked "source" or "tape".

●Left-channel spectrum/equalization display
The display shows the left channel spectrum or equalization level. The spectrum is shown by using bars, and the equalization level is shown by using a dot-type (=) display.
The "full range" area on the right side displays the combined level of all of the frequency bands.
The "full range" display corresponds each setting of the spectrum level.

Spectrum display


(dB)
+12
+6
0
−6
−12
equalizer
63Hz 160Hz 400Hz 1kHz 2.5kHz 6.3kHz 16kHz full range
spectrum
(dB)
36
27
18
9
0

Equalization display


(dB)
+12
+6
0
−6
−12
equalizer
63Hz 160Hz 400Hz 1kHz 2.5kHz 6.3kHz 16kHz full range
spectrum
(dB)
36
27
18
9
0

●Right-channel spectrum/equalization display
The display shows the right channel spectrum or equalization level. The display of the spectrum or equalization level is shown in the same way as for the left channel.

●Equalization-preset indicators ($\boxed{1}\sim\boxed{6}$)
The indicator ($\boxed{1}\sim\boxed{6}$) corresponding to the preset-memory buttons will illuminate.

●Memory indicator (memory)
This indicator will flash for about five seconds when the memory button is pressed.

●Left-channel level-control buttons (EQ level control)
These buttons are used for adjustment of the equalization level of the left channel. When the button corresponding to the frequency to be adjusted is pressed, the equalization level of the left channel changes in 2-dB steps.
If a button is pressed and held, the equalization level of the left channel can be varied continuously throughout a maximum range of ±12 dB.

●Right-channel level-control buttons (EQ level control)
These buttons function in the same way as the left-channel level-control buttons.

●Memory button (memory)
To enter an equalization curve into the memory, first press this button, and then, while the memory indicator is flashing (about 5 seconds), press one of the preset-memory buttons to complete the memorization of the equalization curve.

●Display mode buttons (display mode)
These buttons are used to select either the display of the spectrum or of the equalization level.

EQ level: When this button is pressed, the equalization level is shown on the display.

spectrum analyzer: When this button is pressed, the spectrum is shown on the display.

●Equalization buttons/indicators (equalizer)
These buttons can be used to select the type of equalization correction to be applied to the left and right channel.

on: Select this position to make an equalization correction.

off: Select this position if no equalization correction is desired.

Note that the "on" position is automatically selected if a preset-memory button or a level-control button is pressed while these buttons are set to the "off" position.

●Preset-memory buttons (preset memory)
These buttons are used to preset the equalization curves into the memory. After curves have been preset into the memory, it is then possible to quickly and easily select the desired curve by simply pressing the corresponding button.
There are six memory areas: three are for fixed-equalization-levle memory, and three are for use by the user.

●Spectrum level button (spectrum level)
Press this button to adjust the sensitivity of the spectrum display. Each time the button is pressed, the mode changes as follows.

$$\rightarrow \text{Average level} \rightarrow \text{High level} \rightarrow \text{Average level} \rightarrow \text{Low level} \rightarrow$$

- ●When listening at high volume levels, select low level.
- ●When listening at low volume levels, select high level.
- ●When listening at average volume levels, select average level.

This will keep the spectrum indicators close to the center of the display for easy visibility.
When the button is selected as above, "full range" indicator also change to the same level as spectrum indicators.

●Equalization recording button /indicator (EQ rec)
Press this button to record the sound corrected by the equalizer to the tape deck connected to this unit. When the button is pressed, the indicator will illuminate.

Note: For equalization recording, be sure to set the equalization buttons to "on" and press the input selector buttons t "source".
This only works for tape decks connected to this unit.

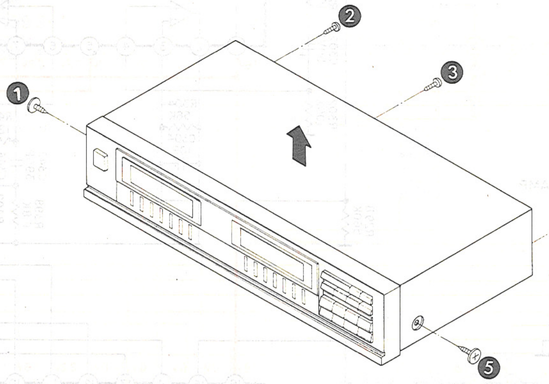
●Input selector buttons/indicators (input selector)
These buttons are used to select the source to be heard.
The indicator for the pressed button will illuminate.

source: Set to this position to listen to equipment (disc player, tune etc.) connected to the amplifier, or to record to the tape dec connected to this unit.

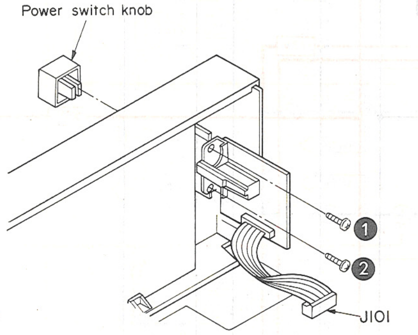
tape: Set to this position to listen to tape deck connected to this unit.

■ DISASSEMBLY INSTRUCTIONS

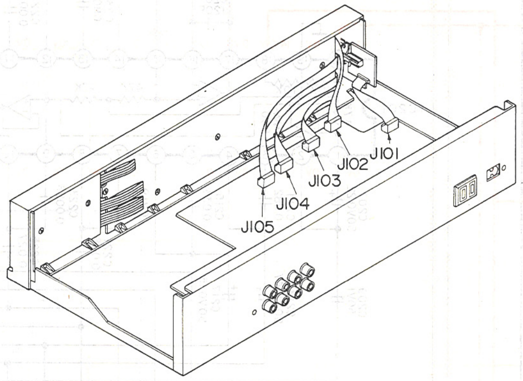
Ref. No. 1	How to remove the cabinet
Procedure 1	●Remove the 5 screws (❶~❺).

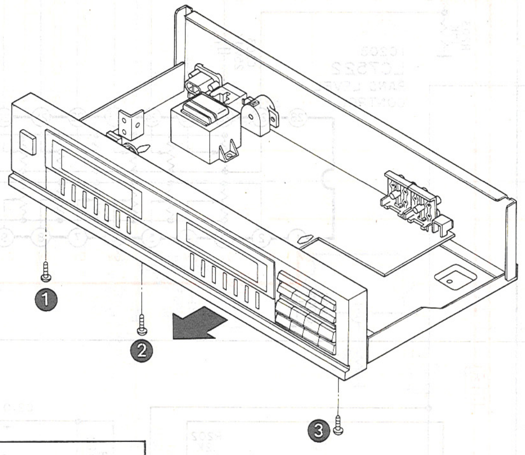


Ref. No. 3	How to remove the power switch P.C.B.
Procedure 1→3	1. Remove the power switch knob by pushing it from behind the front panel. 2. Remove the flat cable (J101). 3. Remove the 2 screws (❶, ❷).

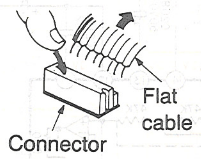

Power switch knob
❶
❷
J101

Ref. No. 2	How to remove the front panel
Procedure 1→2	1. Remove the flat cable (J101, J102, J103, J104, J105). 2. Remove the 3 screws (❶~❸). 3. Remove the front panel in the direction of the arrow.


J101
J102
J103
J104
J105

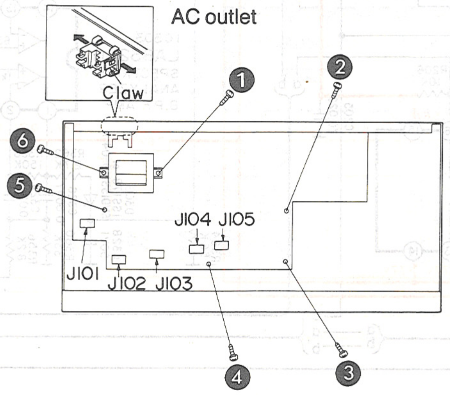


How to remove the flat cable

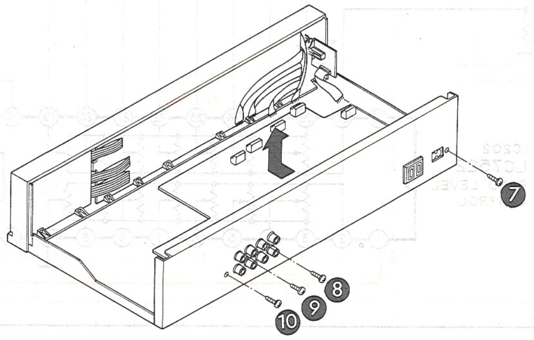

Flat cable
Connector

Pull out the flat cable while pressing the connector.

Ref. No. 4	How to remove the main P.C.B.
Procedure 1→4	1. Remove the 6 screws (❶~❻). 2. Remove the flat cable (J101, J102, J103, J104, J105).


AC outlet
Claw
❶
❷
❸
❹
❺
❻
J104 J105
J101
J102 J103

3. Remove the 4 screws (❼~❿).
4. Pull out the claws in the direction of the arrow, and remove the AC outlet.
5. Remove the main P.C.B. in the direction of the arrow.



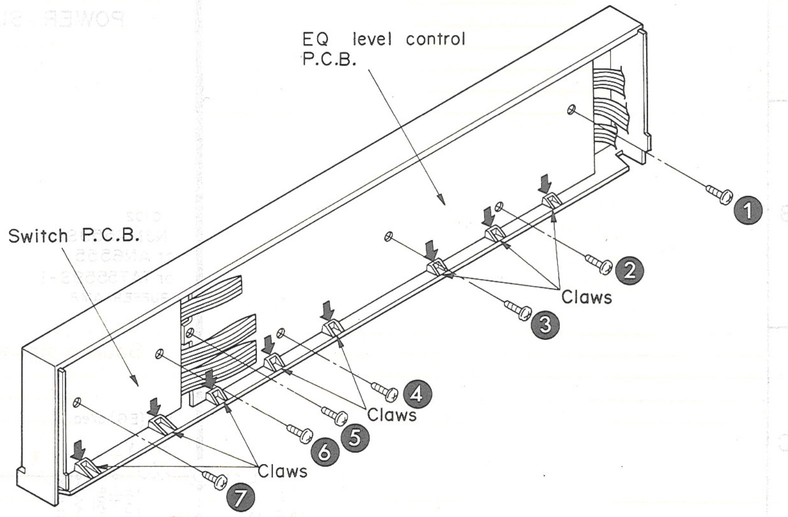
Ref. No. 5	How to remove the EQ level control P.C.B. and switch P.C.B.
Procedure 1→3→5	

How to remove the EQ level control P.C.B.

1. Remove the 5 screws (❶~❺).
2. Push the 6 claws.
3. Remove the EQ level control P.C.B.

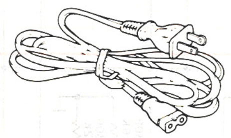
How to remove the switch P.C.B.

1. Remove the 2 screws (❻, ❼).
2. Push the 2 claws.
3. Remove the switch P.C.B.


EQ level control P.C.B.
Switch P.C.B.
❶
❷
❸
❹
❺
❻
❼
Claws
Claws
Claws

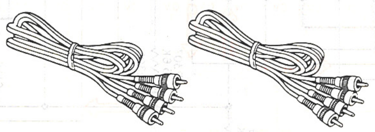
■ ACCESSORIES

●AC power supply cord 1



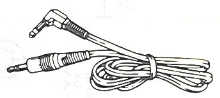
(SFDAC05G2)	For [EK] area only.
(SJA168)	For [PA] and [PE] areas.
(SJA173)	For [XL] area only.
(SJA183)	For [XB] area only.
(SJA185)	For [XA] area only.
(SFDAC05E03)	For others.

●Stereo connection cables 2



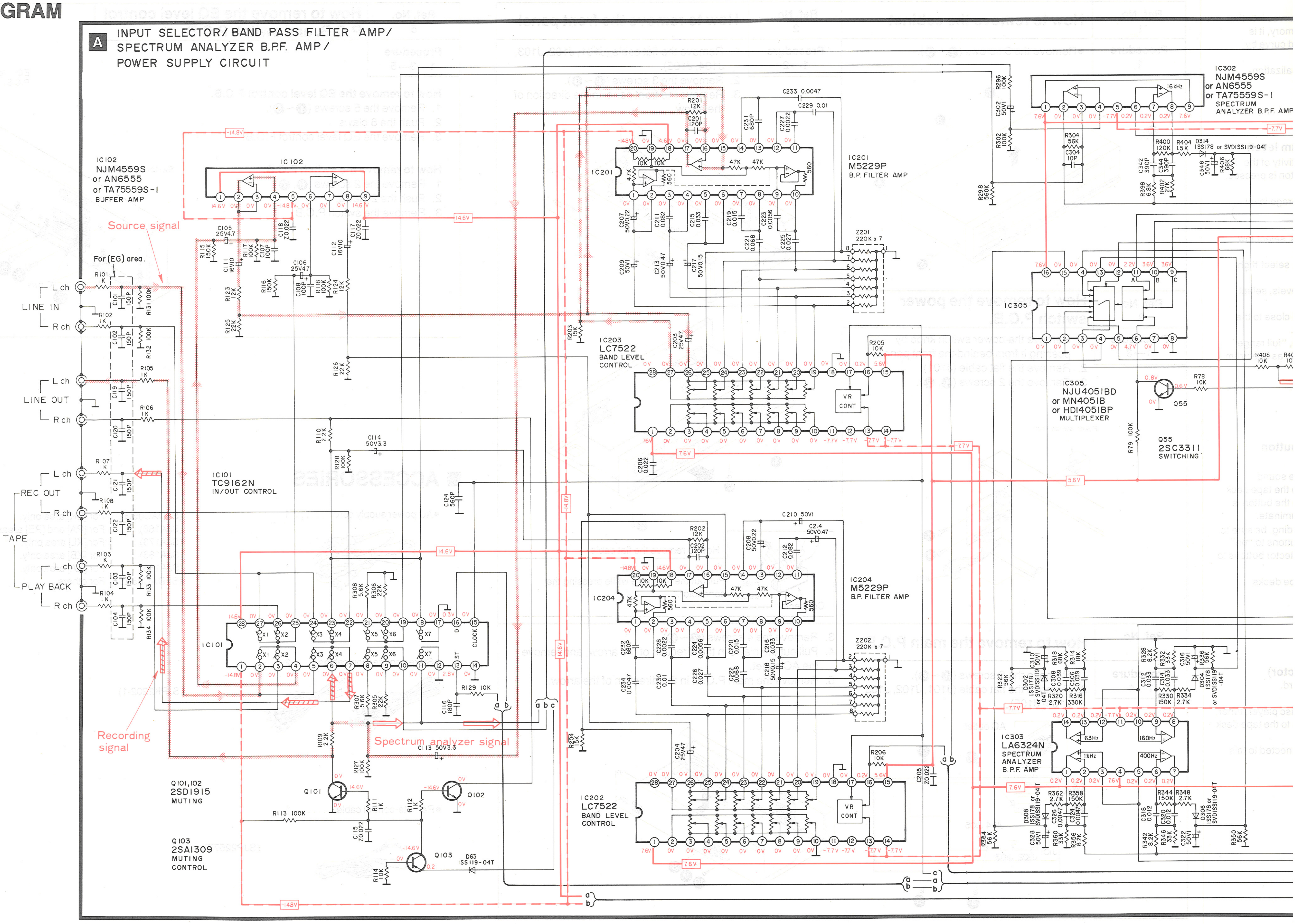
(SJPK2202-1)

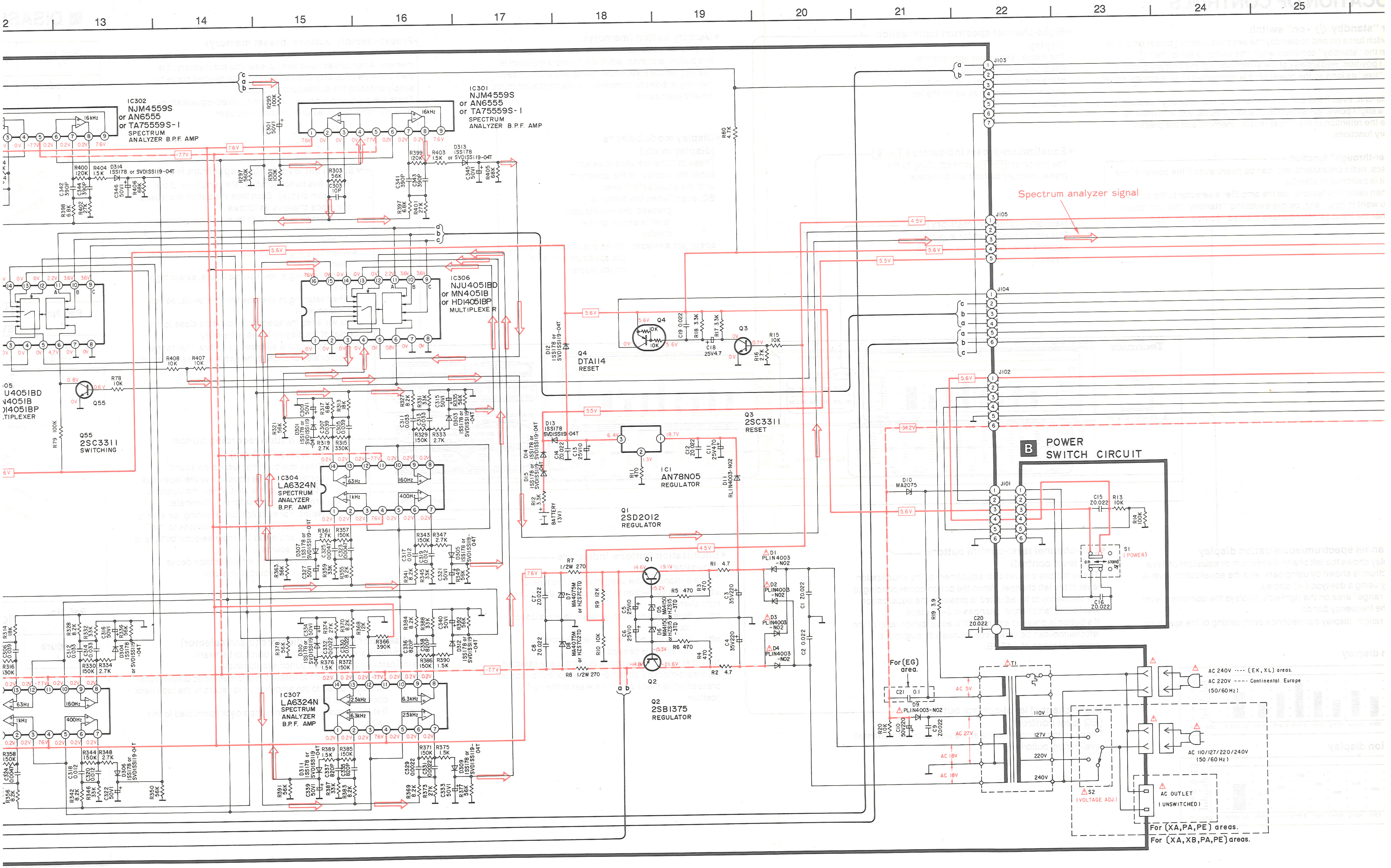
●Remote-control cable 1



(SJP2257T)

■ SCHEMATIC DIAGRAM


A
INPUT SELECTOR/ BAND PASS FILTER AMP/
SPECTRUM ANALYZER B.P.F. AMP/
POWER SUPPLY CIRCUIT
IC102
NJM4559S
or AN6555
or TA75559S-I
BUFFER AMP
Source signal
For (EG) area.
LINE IN
L ch
R ch
LINE OUT
REC OUT
TAPE
PLAY BACK
IC101
TC9162N
IN/OUT CONTROL
Recording signal
Spectrum analyzer signal
Q101,102
2SD1915
MUTING
Q103
2SA1309
MUTING CONTROL
Q101
Q102
Q103
D63
1SS119-04T
IC201
M5229P
B.P. FILTER AMP
IC203
LC7522
BAND LEVEL CONTROL
IC204
M5229P
B.P. FILTER AMP
IC202
LC7522
BAND LEVEL CONTROL
VR CONT
Z201
220K x 7
Z202
220K x 7
IC302
NJM4559S
or AN6555
or TA75559S-I
SPECTRUM ANALYZER B.P.F. AMP
16kHz
IC305
NJU4051BD
or MN4051B
or HD14051BP
MULTIPLEXER
Q55
2SC3311
SWITCHING
IC303
LA6324N
SPECTRUM ANALYZER B.P.F. AMP
63Hz
160Hz
1kHz
400Hz
-14.8V
14.6V
7.6V
-7.7V
5.6V
a b c



2
13
14
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16
17
18
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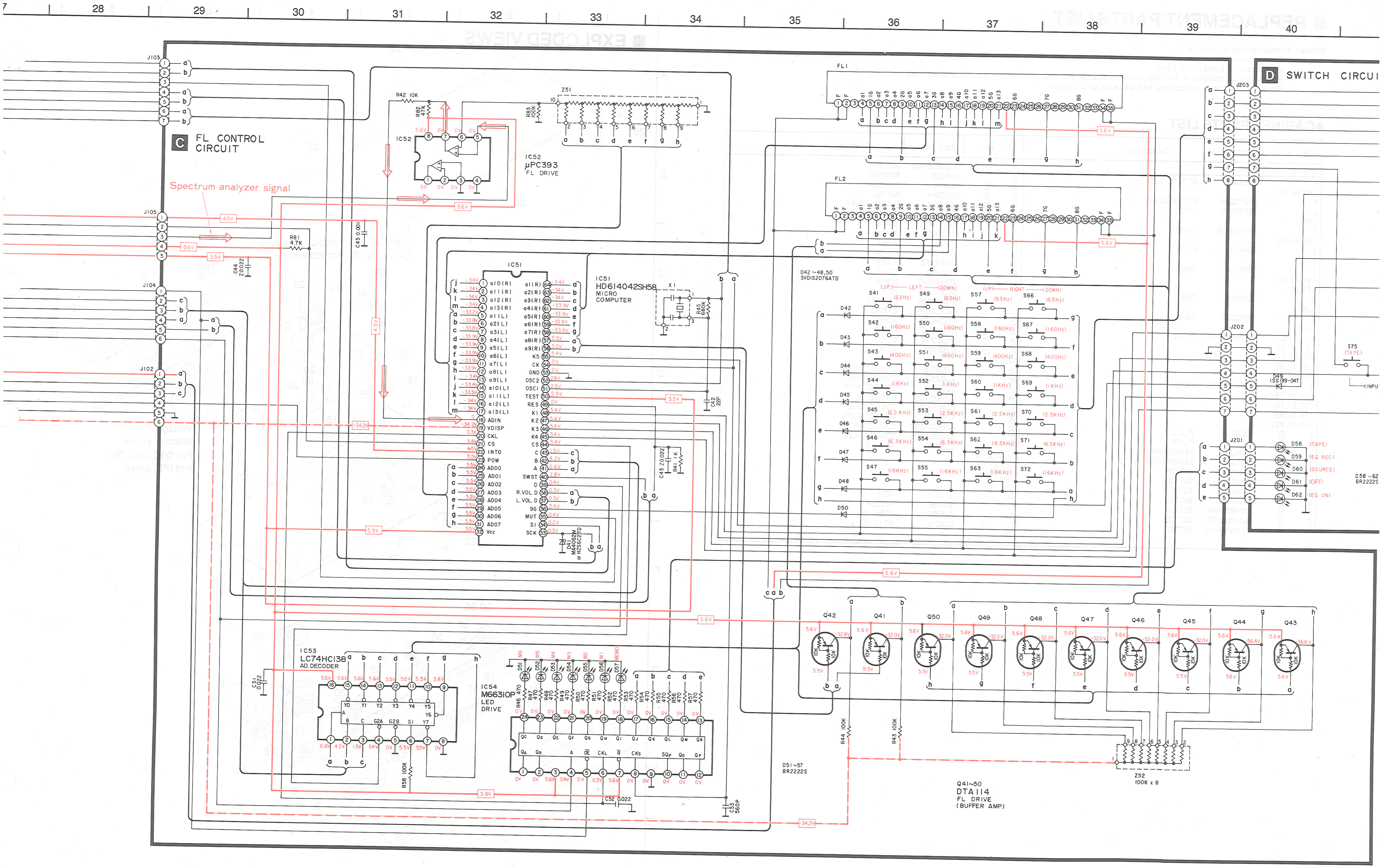
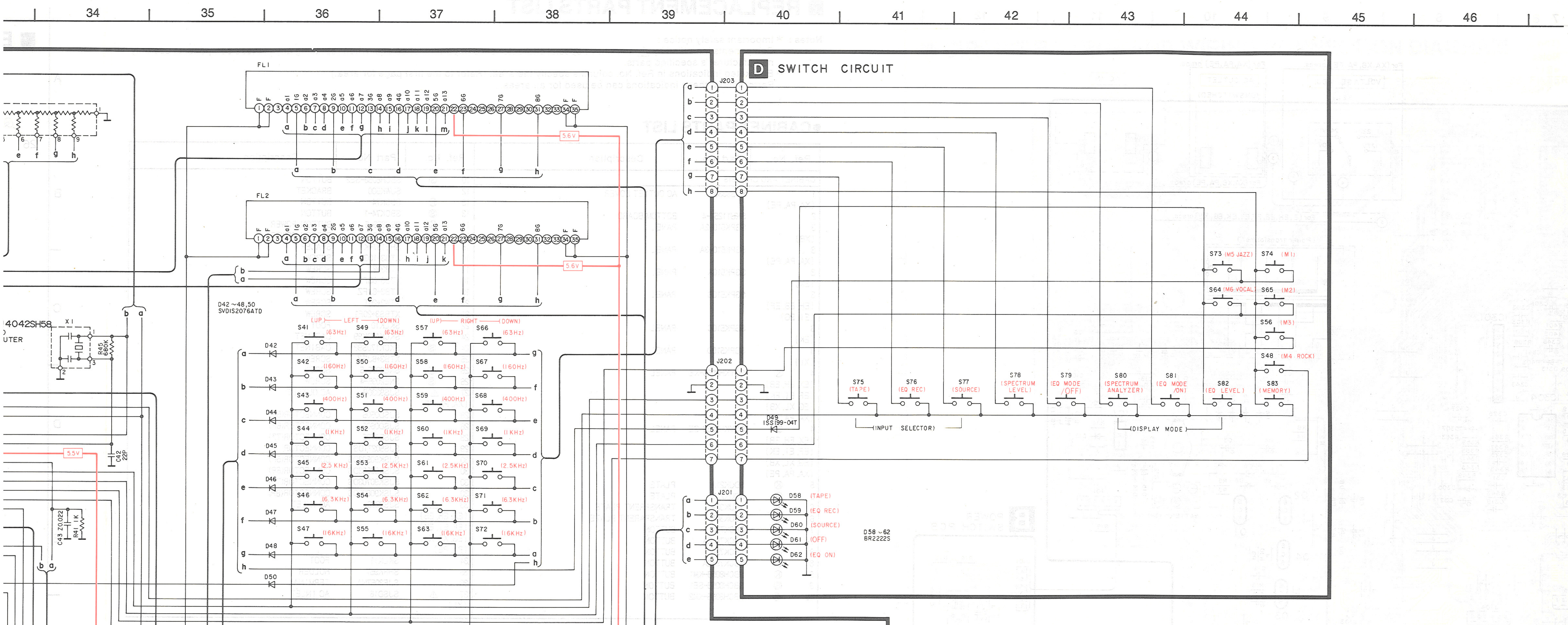
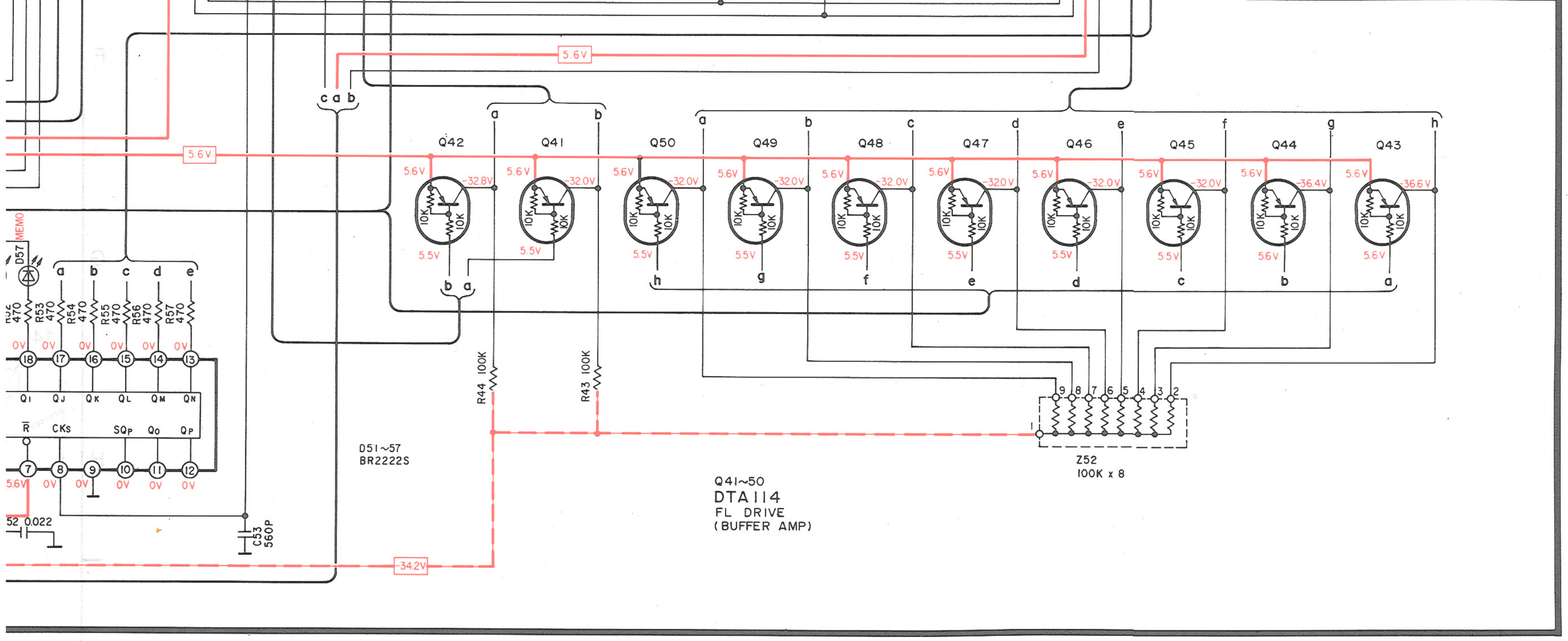
20
21
22
23
24
25
IC302
NJM4559S
or AN6555
or TA75559S-I
SPECTRUM
ANALYZER B.P.F. AMP
16kHz
IC301
NJM4559S
or AN6555
or TA75559S-I
SPECTRUM
ANALYZER B.P.F. AMP
R400 120K
R404 1.5K
D314 ISS178 or SVDISS119-04T
R295 100K
C301 50V1
R297 560K
R301 100K
R303 56K
C303 10P
R399 120K
R403 1.5K
D313 ISS178 or SVDISS119-04T
C345 50V1
R405 68K
C341 390P
C343 390P
R397 68K
R401 27K
R80 4.7K
J103
J105
J104
J102
J101
Spectrum analyzer signal
IC306
NJU4051BD
or MN4051B
or HD14051BP
MULTIPLEXER
U4051BD
N4051B
14051BP
TIPLEXER
R408 10K
R407 10K
R78 10K
Q55
2SC3311
SWITCHING
R79 100K
D12 ISS178 or SVDISS119-04T
Q4
DTA114
RESET
Q3
2SC3311
RESET
R18 3.3K
R17 3.3K
C19 0.022
C18 25V4.7
R15 10K
R16 2.7K
IC304
LA6324N
SPECTRUM
ANALYZER
B.P.F. AMP
63Hz
160Hz
1kHz
400Hz
D13 ISS178 SVDISS119-04T
C14 Z0.022
C13 25V10
IC1
AN78N05
REGULATOR
C12 Z0.022
C11 25V470
D11 RLIN4003-N02
R11 470
D14 ISS178 or SVDISS119-04T
D15 ISS178 or SVDISS119-04T
R12 3.3K
BATTERY (3V)
Q1
2SD2012
REGULATOR
R7 1/2W 270
R8 1/2W 270
C7 Z0.022
C8 Z0.022
D7 MA4075M or HZ57C2TD
D8 MA4075M or HZ57C2TD
R9 12K
R10 10K
C5 25V10
C6 25V10
R5 470
R6 470
R3 470
R4 470
R1 4.7
R2 4.7
C3 35V220
C4 35V220
D1 PLIN4003-N02
D2 PLIN4003-N02
D3 PLIN4003-N02
D4 PLIN4003-N02
C1 Z0.022
C2 0.022
Q2
2SB1375
REGULATOR
IC307
LA6324N
SPECTRUM
ANALYZER
B.P.F. AMP
2.5kHz
6.3kHz
B
POWER
SWITCH CIRCUIT
C15 Z0.022
R13 10K
R14 100K
S1 (POWER)
on
stand by
C16 Z0.022
D10 MA2075
R19 3.9
C20 Z0.022
For (EG) area.
C21 0.1
D9 PLIN4003-N02
R20 10K
C10 50V220
C9 Z0.022
T1
AC 5V
AC 27V
AC 18V
AC 18V
110V
127V
220V
240V
S2 (VOLTAGE ADJ.)
AC 240V ---- (EK,XL) areas.
AC 220V ---- Continental Europe
(50/60Hz)
AC 110/127/220/240V
(50/60Hz)
AC OUTLET
(UNSWITCHED)
For (XA,PA,PE) areas.
For (XA,XB,PA,PE) areas.

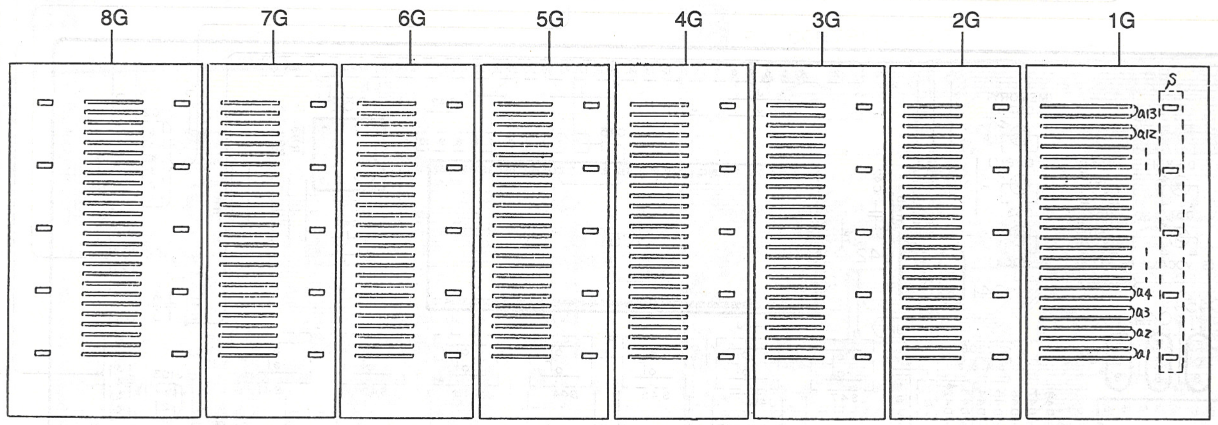

28
29
30
31
32
33
34
35
36
37
38
39
40
C FL CONTROL CIRCUIT
D SWITCH CIRCUI
Spectrum analyzer signal
J103
J105
J104
J102
R81 4.7K
C45 0.001
C44 Z0.022
R42 10K
R82 47K
R83 100K
Z51
IC52
IC52 μPC393 FL DRIVE
IC51
IC51 HD614042SH58 MICRO COMPUTER
X1
R45 680K
C42 22P
C43 Z0.022
R41 1K
D41 MA4062M or HZS6C2TD
FL1
FL2
D42~48,50 SVD1S2076ATD
S41
S42
S43
S44
S45
S46
S47
S49
S50
S51
S52
S53
S54
S55
S57
S58
S59
S60
S61
S62
S63
S66
S67
S68
S69
S70
S71
S72
(UP)
LEFT
(DOWN)
RIGHT
(63Hz)
(160Hz)
(400Hz)
(1KHz)
(2.5KHz)
(6.3KHz)
(16KHz)
D42
D43
D44
D45
D46
D47
D48
D50
J203
J202
J201
S75 (TAPE)
D49 1SS199-04T
(INPUT
D58 (TAPE)
D59 (EQ REC)
D60 (SOURCE)
D61 (OFF)
D62 (EQ ON)
D58~62 BR2222S
IC53 LC74HC138 AD DECODER
C51 0.022
R58 100K
IC54 M66310P LED DRIVE
D51
D52
D53
D54
D55
D56
D57
M6
M5
M4
M3
M2
M1
MEMO
R46 470
R47 470
R48 470
R49 470
R50 470
R51 470
R52 470
R53 470
R54 470
R55 470
R56 470
R57 470
C52 0.022
C53 560P
D51~57 BR2222S
Q42
Q41
Q50
Q49
Q48
Q47
Q46
Q45
Q44
Q43
R44 100K
R43 100K
Q41~50 DTA114 FL DRIVE (BUFFER AMP)
Z52 100K x 8
5.6V
5.5V
4.5V
-34.2V


34
35
36
37
38
39
40
41
42
43
44
45
46
FL1
FL2
D SWITCH CIRCUIT
J203
J202
J201
4042SH58
X1
R45 680K
D42~48,50
SVDIS2076ATD
S41 S49 S57 S66 (63Hz)
S42 S50 S58 S67 (160Hz)
S43 S51 S59 S68 (400Hz)
S44 S52 S60 S69 (1KHz)
S45 S53 S61 S70 (2.5KHz)
S46 S54 S62 S71 (6.3KHz)
S47 S55 S63 S72 (16KHz)
(UP) LEFT (DOWN)
(UP) RIGHT (DOWN)
D42 D43 D44 D45 D46 D47 D48 D50
C42 22P
C43 Z0.022
R41 1K
5.5V
5.6V
S73 (M5 JAZZ)
S74 (M1)
S64 (M6 VOCAL)
S65 (M2)
S56 (M3)
S48 (M4 ROCK)
S75 (TAPE)
S76 (EQ REC)
S77 (SOURCE)
S78 (SPECTRUM LEVEL)
S79 (EQ MODE /OFF)
S80 (SPECTRUM ANALYZER)
S81 (EQ MODE /ON)
S82 (EQ LEVEL)
S83 (MEMORY)
INPUT SELECTOR
DISPLAY MODE
D49 1SS199-04T
D58 (TAPE)
D59 (EQ REC)
D60 (SOURCE)
D61 (OFF)
D62 (EQ ON)
D58~62 BR2222S


Q42 Q41 Q50 Q49 Q48 Q47 Q46 Q45 Q44 Q43
10K
-32.8V
-32.0V
-36.4V
-36.6V
5.6V
5.5V
D57
MEMO
R52 R53 R54 R55 R56 R57 470
R44 100K
R43 100K
Z52 100K x 8
D51~57 BR2222S
Q41~50 DTA114 FL DRIVE (BUFFER AMP)
C53 560P
-34.2V

DESCRIPTION OF FL PANEL

•GRID ASSIGNMENT


8G
7G
6G
5G
4G
3G
2G
1G
S
a13
a12
a4
a3
a2
a1

•PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
CONNECTION	F2	F2	NP	a1	1G	a2	a3	a4	2G	a5	a6	a7	3G	a8	a9	4G	a10	a11	a12	5G	a13	S	6G	NP	NP	NP	7G	NP	NP	NP	8G	NP	NP	F1	F1

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

●**S1:**	Power switch in "**on**" position.
●**S2:**	Voltage selector switch in "**240 V**" position. **(110 V↔127 V↔220 V↔240 V)** **For (XA), (XB), (PA) and (PE) areas.**
●**S41～S47:**	Equalizer level "**up**" control switches at each frequency (Lch).
●**S48:**	Preset-memory "**4 rock**" switch.
●**S49～S55:**	Equalizer level "**down**" control switches at each frequency (Lch).
●**S56:**	Preset-memory "**3**" switch.
●**S57～S63:**	Equalizer level "**up**" control switches at each frequency (Rch).
●**S64:**	Preset-memory "**6 vocal**" switch.
●**S65:**	Preset-memory "**2**" switch.
●**S66～S72:**	Equalizer level "**down**" control switches at each frequency (Rch).
●**S73:**	Preset-memory "**5 jazz**" switch.
●**S74:**	Preset-memory "**1**" switch.
●**S75, S77:**	Input selector switches. **S75; tape S77; source**
●**S76:**	Equalization recording switch.
●**S78:**	Spectrum level switch.
●**S79, S81:**	Equalization switches. **S79; off S81; on**
●**S80, S82:**	Display mode switches. **S80; Spectrum analyzer S82; EQ level**
●**S83:**	Memory switch.

●Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

⇨	Source signal	⇨	B.P.F. signal
⇨	Spectrum analyzer Signal	⇨	Recording Signal
─□─	Positive Voltage lines	─□─	Negative Voltage lines

●Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

***Caution!**
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
*Cover the parts boxes made of plastics with aluminum foil.
*Ground the soldering iron.
*Put a conductive mat on the work table.
*Do not touch the legs of IC or LSI with the fingers directly.

CAUTION:
This lithium battery is a critical component (Type No. BR2032-1VC. Mfrd by Matsushita Battery Industrial Co., Ltd.). Please observe for the proper polarity and the exact location when replacing it and soldering the replacement lithium battery in.

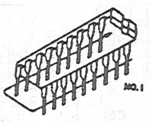
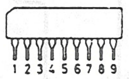
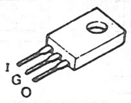
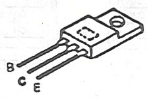
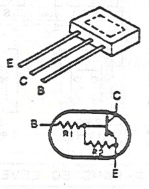
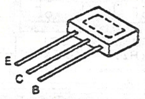
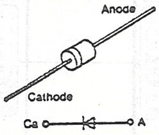
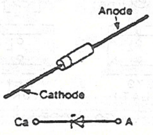
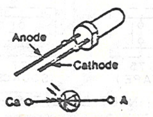
VARNING:
Detta litiumbatteri (av typ Nr. BR2032-1VC, tillverkad av Matsushita Battery Industrial Co., Ltd.) är en kritisk komponent. Var säker om att iaktta korrekt polaritet och exakt läge av litiumbatteriet under ersättning och lödning av ersättningsbatteriet.

LITIUM PARISTO!
Pariston saa vaihtaa ainoastaan saman valmistajan saman tyyppiseen paristoon.
Pariston virheellisestä käsittelystä syntyy rajähdysvaara.

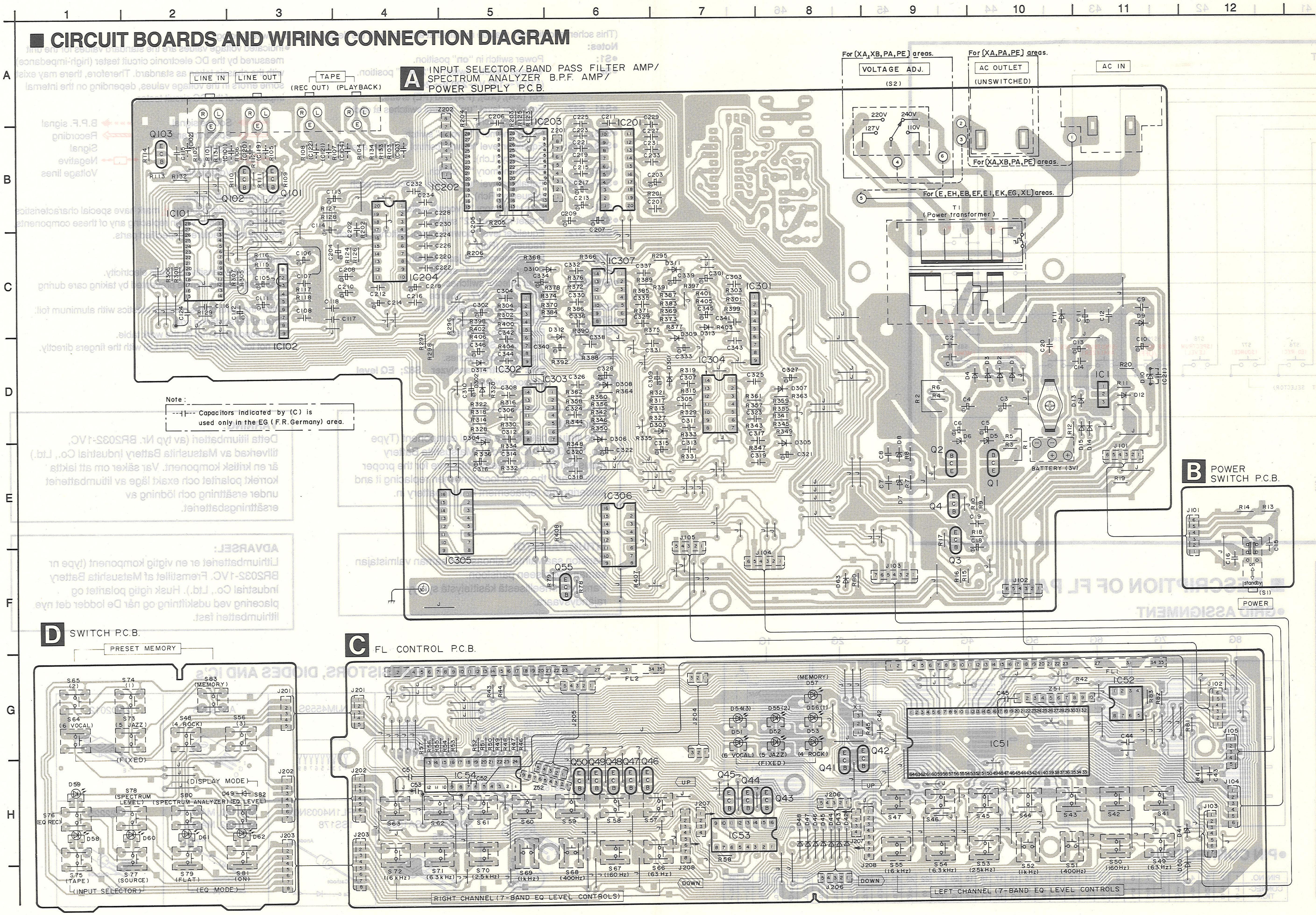
ADVARSEL:
Lithiumbatteriet er en vigtig komponent (type nr BR2032-1VC. Fremstillet af Matsushita Battery Industrial Co., Ltd.). Husk rigtig polaritet og placering ved udskiftning og når De lodder det nye lithiumbatteri fast.

●TERMINAL GUID OF TRANSISTORS, DIODES AND IC's

UPC393	8 pin
LA6324N	14 pin
LC74HC138 NJU4051BD	16 pin
LC6528C-3664	18 pin
M5229P	20 pin
M66310P	24 pin
LC7522 TC9162N	28 pin

	NJM4559S 	AN78N05 	2SD2012 	
DTA114ESTP 	DTC143TSTP 2SC3311, 2SA1309, 2SD1915 	RL1N4003N02 1SS178 	MA4150, MA4075, MA4062, MA162 	BR2222S 

■ CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM


A
INPUT SELECTOR / BAND PASS FILTER AMP/
SPECTRUM ANALYZER B.P.F. AMP/
POWER SUPPLY P.C.B.
LINE IN
LINE OUT
TAPE
(REC OUT)
(PLAYBACK)
For (XA, XB, PA, PE) areas.
VOLTAGE ADJ.
(S2)
220V
240V
127V
110V
For (XA, PA, PE) areas.
AC OUTLET
(UNSWITCHED)
For (XA, XB, PA, PE) areas.
AC IN
For (E, EH, EB, EF, E I, EK, EG, XL) areas.
T1
(Power transformer)
BATTERY (3V)
IC101
IC102
IC201
IC202
IC203
IC204
IC301
IC302
IC303
IC304
IC305
IC306
IC307
IC1
Q1
Q2
Q3
Q4
Q55
Q101
Q102
Q103
B
POWER
SWITCH P.C.B.
standby
on
(S1)
POWER
D
SWITCH P.C.B.
PRESET MEMORY
S83
(MEMORY)
S65
(2)
S74
(1)
S64
(6 VOCAL)
S73
(5 JAZZ)
S46
(4 ROCK)
S56
(3)
(FIXED)
DISPLAY MODE
S78
(SPECTRUM LEVEL)
S80
(SPECTRUM ANALYZER)
S82
(EQ LEVEL)
S76
(EQ REC)
S75
(TAPE)
S77
(SOURCE)
S79
(FLAT)
S81
(ON)
(INPUT SELECTOR)
(EQ MODE)
C
FL CONTROL P.C.B.
FL1
FL2
IC51
IC52
IC53
IC54
(MEMORY)
D57
D54(3)
D55(2)
D56(1)
(6 VOCAL)
(5 JAZZ)
(FIXED)
(4 ROCK)
Q41
Q42
Q43
Q44
Q45
Q46
Q47
Q48
Q49
Q50
UP
DOWN
S72
(16kHz)
S71
(6.3kHz)
S70
(2.5kHz)
S69
(1kHz)
S68
(400Hz)
S67
(160Hz)
S66
(63Hz)
S55
(16kHz)
S54
(6.3kHz)
S53
(2.5kHz)
S52
(1kHz)
S51
(400Hz)
S50
(160Hz)
S49
(63Hz)
RIGHT CHANNEL (7-BAND EQ LEVEL CONTROLS)
LEFT CHANNEL (7-BAND EQ LEVEL CONTROLS)
1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H

Note:
--||-- Capacitors indicated by (C) is used only in the EG (F.R.Germany) area.

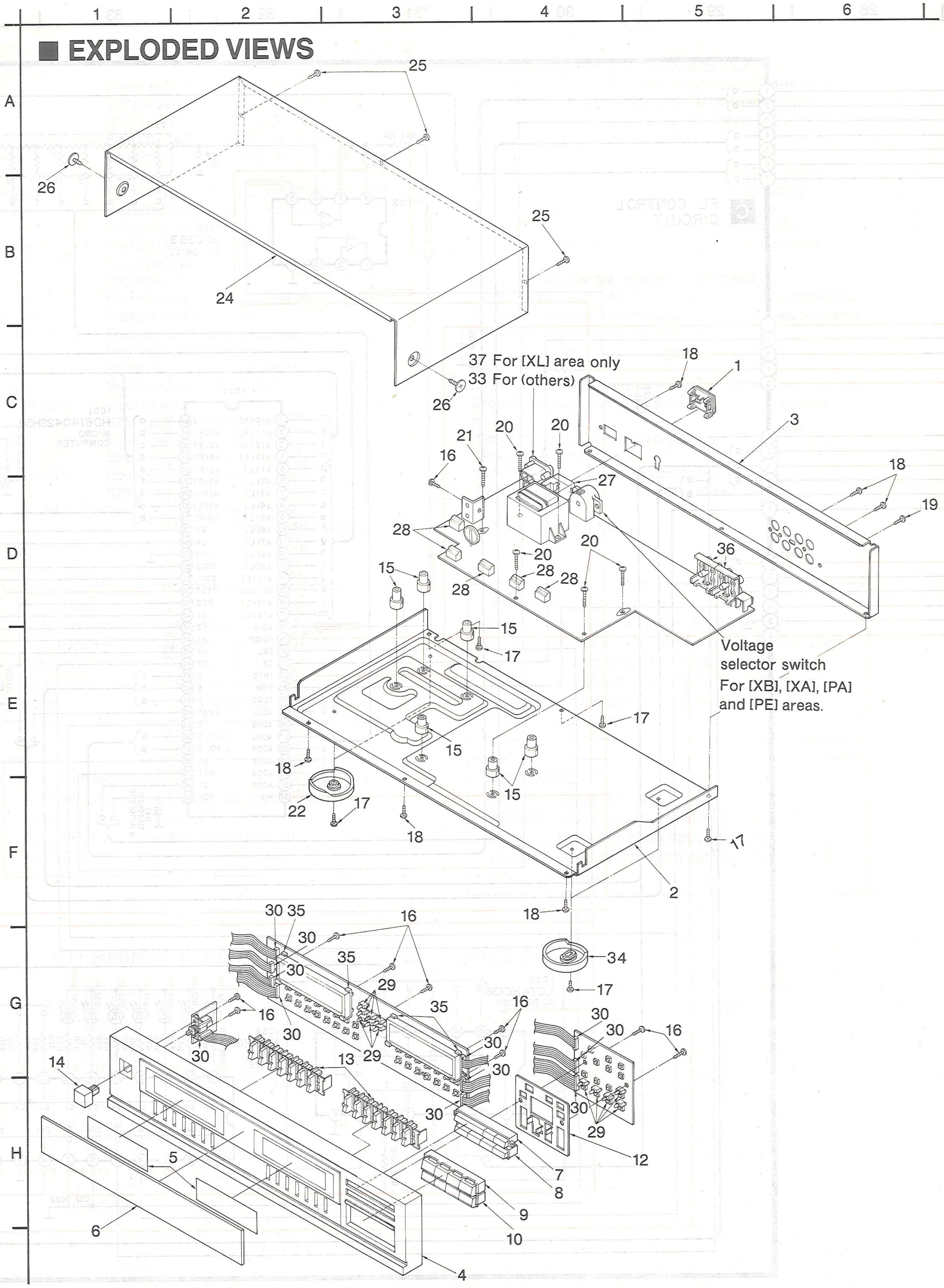
■ REPLACEMENT PARTS LIST

Notes : * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

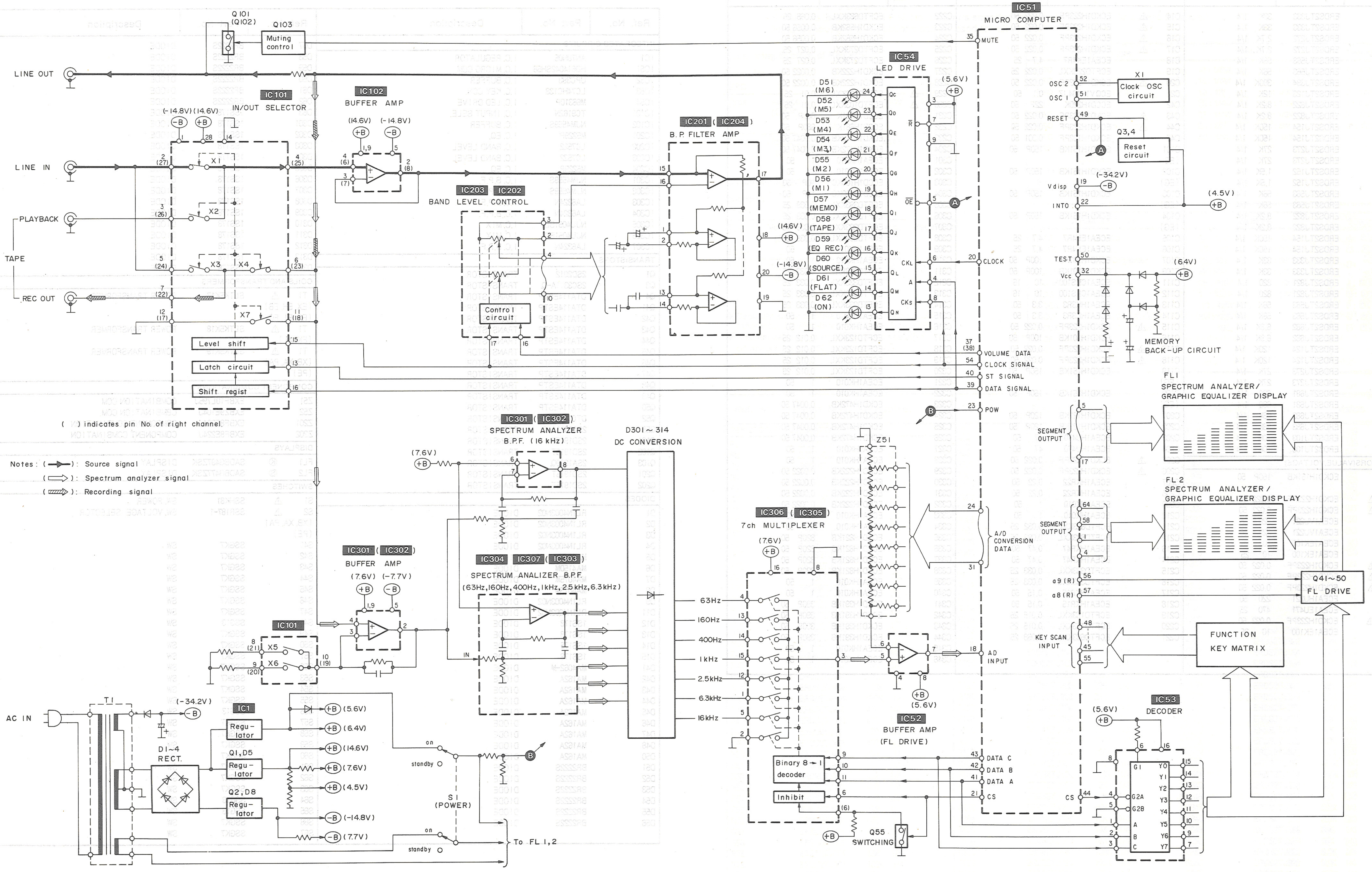
•CABINET PARTS LIST

Ref. No.	Part No.	Description
CABINET AND CHASSIS		
1 〔XA, PA, PE〕	SJS9330A	AC OUTLET COVER
2	SKU11257-4	BOTTOM BOARD
3 〔XB〕	SGPK510-2A	PANEL
3 〔XA, PA, PE〕	SGPK510-3A	PANEL
3 〔EX〕	SGPK510A	PANEL
3 〔EH, EB, EF〕 〔EI, EG〕	SGPK510B	PANEL
3 〔EK〕	SGPK510C	PANEL
3 〔XL〕	SGPK510D	PANEL
4 Ⓚ 〔EX, EH, EB〕 〔EF, EI, EK〕 〔EG, XL, XB〕 〔XA, PA, PE〕	SGYKH8058-KE	PANEL
4 Ⓢ 〔EX, EH, EB〕 〔EF, EI, EK〕 〔EG, XL, XB〕 〔XA, PA, PE〕	SGYKH8058-SE	PANEL
5 Ⓚ	SDUK21A	PLATE
5 Ⓢ	SDUK21B	PLATE
6 Ⓚ	SGUK30A	TRANSPRENT PLATE
6 Ⓢ	SGUK30B	TRANSPARENT PLATE
7 Ⓚ	SBCK78A	BUTTON
7 Ⓢ	SBCK78-2A	BUTTON
8 Ⓚ	SBCK79A	BUTTON
8 Ⓢ	SBCK79-2A	BUTTON
9 Ⓚ	SBCH8058-KM1	BUTTON
9 Ⓢ	SBCH8058-SE1	BUTTON
10 Ⓚ	SBCH8058-KM2	BUTTON
10 Ⓢ	SBCH8058-SE2	BUTTON
12	SUWK500	BRACKET
13 Ⓚ	SBCK74	BUTTON
13 Ⓢ	SBCK74-1	BUTTON
14 Ⓚ	SBC666-5	BUTTON, POWER
14 Ⓢ	SBC666	BUTTON, POWER
15	SHE187-K	SPACER
16	XTB3+10G	SCREW
17	XTB3+8J	SCREW
18	XTB3+8GFZ	SCREW
19	XTB3+8JFZ	SCREW
20	XTW3+20T	SCREW
21	XTBS3+20F1	SCREW
22	SKLK10	FOOT
24 Ⓚ	SKCK170K99	CABINET
24 Ⓢ	SKCK170S98	CABINET
25	XTB3+8JFZ	SCREW
26 Ⓚ	SNE2095-5	SCREW
26 Ⓢ	SNE2095-4	SCREW
27 ⚠ 〔XA, PA, PE〕	SJS9330B	AC OUTLET
28	SJSD0505	CONNECTOR(5P)
28	SJSD0605	CONNECTOR(6P)
28	SJSD0705	CONNECTOR(7P)
29	SJS50271DS	CONNECTOR
30	SJSK90503DS	CONNECTOR(5P)
30	SJSK90603DS	CONNECTOR(6P)
30	SJSK90703DS	CONNECTOR(7P)
30	SJSK90803DS	CONNECTOR(8P)
33 ⚠ 〔EX, EH, EB〕 〔EF, EI, EK〕 〔EG, XB, XA〕 〔PA, PE〕	SJS9236	AC INLET
34	SKLK11	FOOT
35	SHRK957	HOLDER
36	SJF3057NA	TERMINAL
37 ⚠ 〔XL〕	SJSD16	AC INLET

■ EXPLODED VIEWS


1
2
3
4
5
6
A
B
C
D
E
F
G
H
25
26
24
25
37 For [XL] area only
33 For (others)
26
18
1
3
21
20
20
16
27
18
19
28
20
20
36
15
28
28
28
15
17
Voltage selector switch
For [XB], [XA], [PA] and [PE] areas.
17
18
15
15
22
17
18
17
2
30 35
16
18
30
35
34
30
29
17
16
35
16
30
14
30
30
13
29
30
30
16
30
30
29
12
5
7
8
9
10
6
4

■ BLOCK DIAGRAM



Q101 (Q102)
Q103
Muting control
LINE OUT
LINE IN
PLAYBACK
TAPE
REC OUT
IC101
IN/OUT SELECTOR
(-14.8V) (14.6V)
X1
X2
X3
X4
X7
Level shift
Latch circuit
Shift regist
( ) indicates pin No. of right channel.
IC102
BUFFER AMP
(14.6V) (-14.8V)
IC203 IC202
BAND LEVEL CONTROL
Control circuit
IC201 (IC204)
B.P. FILTER AMP
(14.6V)
(-14.8V)
IC54
LED DRIVE
(5.6V)
D51 (M6)
D52 (M5)
D53 (M4)
D54 (M3)
D55 (M2)
D56 (M1)
D57 (MEMO)
D58 (TAPE)
D59 (EQ REC)
D60 (SOURCE)
D61 (FLAT)
D62 (ON)
IC51
MICRO COMPUTER
MUTE
CLOCK
VOLUME DATA
CLOCK SIGNAL
ST SIGNAL
DATA SIGNAL
POW
OSC 2
OSC 1
RESET
Vdisp
INTO
TEST
Vcc
X1
Clock OSC circuit
Q3,4
Reset circuit
(-34.2V)
(4.5V)
(6.4V)
MEMORY BACK-UP CIRCUIT
FL1
SPECTRUM ANALYZER/ GRAPHIC EQUALIZER DISPLAY
FL2
SPECTRUM ANALYZER/ GRAPHIC EQUALIZER DISPLAY
SEGMENT OUTPUT
a9 (R)
a8 (R)
Q41~50
FL DRIVE
KEY SCAN INPUT
FUNCTION KEY MATRIX
Notes: (→): Source signal
(⇨): Spectrum analyzer signal
(▨): Recording signal
IC301 (IC302)
SPECTRUM ANALYZER B.P.F. (16 kHz)
(7.6V)
D301~314
DC CONVERSION
IC301 (IC302)
BUFFER AMP
(7.6V) (-7.7V)
IC304 IC307 (IC303)
SPECTRUM ANALIZER B.P.F.
(63Hz, 160Hz, 400Hz, 1kHz, 2.5kHz, 6.3kHz)
IN
IC101
X5
X6
IC306 (IC305)
7ch MULTIPLEXER
63Hz
160Hz
400Hz
1kHz
2.5kHz
6.3kHz
16kHz
Binary 8→1 decoder
Inhibit
Q55 SWITCHING
Z51
A/D CONVERSION DATA
AD INPUT
(5.6V)
IC52
BUFFER AMP (FL DRIVE)
DATA C
DATA B
DATA A
CS
IC53
DECODER
G1
G2A
G2B
A
B
C
Y0
Y1
Y2
Y3
Y4
Y5
Y6
Y7
AC IN
T1
(-34.2V)
IC1
Regu-lator
D1~4 RECT.
Q1,D5
Regu-lator
Q2,D8
Regu-lator
(5.6V)
(6.4V)
(14.6V)
(7.6V)
(4.5V)
(-14.8V)
(7.7V)
on
standby
S1 (POWER)
To FL 1,2
A
B

■ FUNCTIONS OF IC TERMINALS

●Microcomputer IC51 (HD614042 SH58)

Pin No.	Symbol	I/O	Function
1	D11	O	+6 dB segment output to FL meter. (Rch)
2	D12	O	+8 dB segment output to FL meter. (Rch)
3	D13	O	+10 dB segment output to FL meter. (Rch)
4	D14	O	+12 dB segment output to FL meter. (Rch)
5	D15	O	−12 dB segment output to FL meter. (Lch)
6	R00	O	−10 dB segment output to FL meter. (Lch)
7	R01	O	−8 dB segment output to FL meter. (Lch)
8	R02	O	−6 dB segment output to FL meter. (Lch)
9	R03	O	−4 dB segment output to FL meter. (Lch)
10	R10	O	−2 dB segment output to FL meter. (Lch)
11	R11	O	0 dB segment output to FL meter. (Lch)
12	R12	O	+2 dB segment output to FL meter. (Lch)
13	R13	O	+4 dB segment output to FL meter. (Lch)
14	R20	O	+6 dB segment output to FL meter. (Lch)
15	R21	O	+8 dB segment output to FL meter. (Lch)
16	R22	O	+10 dB segment output to FL meter. (Lch)
17	R23	O	+12 dB segment output to FL meter. (Lch)
18	RA0	I	A/D input, high withstand voltage.
19	RA1/ VD1SP	I	Output power supply (−32 V) for high withstand voltage terminals.
20	R30	O	LED Driver, CKL output
21	R31	O	MPX, CS output (Lch, Rch)
22	R32/ INT0	I	Mode selector terminal. H: Active mode L: Stop mode
23	R33/ INT1	I	Power switch ON/OFF detection terminal. H: ON L: OFF
24	R50	O	A/D conversion data bit 0 output.
25	R51	O	A/D conversion data bit 1 output.
26	R52	O	A/D conversion data bit 2 output.
27	R53	O	A/D conversion data bit 3 output.
28	R60	O	A/D conversion data bit 4 output.
29	R61	O	A/D conversion data bit 5 output.
30	R62	O	A/D conversion data bit 6 output.
31	R63	O	A/D conversion data bit 7 output.
32	VCC	I	5 V power supply.
33	R40/ SCK	I	Remote control data. Communication data clock input.
34	R41/ SI	I	Remote control data. Communication data input.
35	R42	O	Muting control. H: ON L: OFF
36	R43	O	Key scan output.
37	R70	O	Electronic volume control data output. (Lch)
38	R71	O	Electronic volume control data output. (Rch)
39	R72	O	Electronic switch and LED driver data output.
40	R73	O	Electronic switch strobe output.
41	R80	O	MPX data A output.
42	R81	O	MPX data B output.
43	R82	O	MPX data C output.
44	R83	O	Grid control output.
45	R90	I	Key signal input.
46	R91	I	Key signal input.
47	R92	I	Key signal input.
48	R93	I	Key signal input.
49	RESET	I	Reset signal input.
50	TEST	—	—
51	OSC1	I	Clock signal input.
52	OSC2	O	Clock signal output.
53	GND	I	Grounding
54	D0	O	Electronic switch, volume and LED driver clock output.
55	D1	O	Key signal input.
56	D2	O	+4 dB segment output to FL meter. (Rch)
57	D3	O	+2 dB segment output to FL meter. (Rch)
58	D4	O	0 dB segment output to FL meter. (Rch)
59	D5	O	−2 dB segment output to FL meter. (Rch)
60	D6	O	−4 dB segment output to FL meter. (Rch)
61	D7	O	−6 dB segment output to FL meter. (Rch)
62	D8	O	−8 dB segment output to FL meter. (Rch)
63	D9	O	−10 dB segment output to FL meter. (Rch)
64	D10	O	−12 dB segment output to FL meter. (Rch)

■ RESISTORS AND CAPACITORS

Notes : * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

Numbering System of Resistor

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1KΩ)

ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470Ω)

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001μF)	Tolerance	Peculiarity

ECEA	50	M	330
Type	Voltage (50V)	Pecliarity	Value (33μF)

- ● Capacity are in microfarads (μF) unless specified otherwise, P = Pico-farads (pF) F = Farads (F).
- ● Resistance are in ohms (Ω), unless specified otherwise, 1K = 1,000Ω, 1M = 1,000kΩ

Resistor Type		Wattage		Tolerance
ERD	: Carbon	10 : 1/8W	12 : 1/2W	J : ±5%
ERG	: Metal Oxide	14 : 1/4W	25 : 1/4W	F : ±1%
ERQ	: Fuse Type Metal	1A : 1W	18 : 1/8W	G : ±2%
ERX	: Metal Film	S2 : 1/4W	S1 : 1/2W	J : ±5%
ERD L	: Carbon (chip)	2F : 1/4W	50 : 1/2W	K : ±10%
ERO K	: Metal Film (chip)	2A : 2W	3A : 3W	M : ±20%
ERC	: Solid	6G : 1/10W	8G : 1/8W	
ERF	: Incombustible Box-Shaped			
ERM	: Wire-Wound			
RRJ	: Cip Resistor			
ERJ	: Cip Resistor			

Capacitor Type		Voltage		Tolerance
ECE	: Electrolytic	0J : 6.3V	1A : 10V	K : ±10%
ECCD	: Ceramic	1C : 16V	1E : 25V	M : ±20%
ECKD	: Ceramic Capacitor	1H : 50V	1V : 35V	Z : +80 −20 %
ECQM	: Poyester	50 : 50V	05 : 50V	
ECQP	: Polypropylene	2H : 500V	2A : 100V	J : ±5%
ECG	: Ceramic	1 : 100V	1J : 63V	G : ±2%
ECEA N	: Non Polar Electrolytic	KC : 400V AC		F : ±1%
QCU	: Ceramic (Chip Type)	KC : 125V AC		C : ±0.25pF
ECUX	: Ceramic (Chip Type)	(UL)		D : ±0.5pF
ECF	: Semiconductor			
EECW	: Liquid electrolyte double layer capacitor			

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
RESISTORS(VALUE,WATTAGE)			R81	ERDS2TJ472	4.7K 1/4	R301	ERDS2TJ104	100K 1/4
R1	ERD2FCJ4R7	4.7 1/4	R82	ERDS2TJ473	47K 1/4	R302	ERDS2TJ104	100K 1/4
R2	ERD2FCJ4R7	4.7 1/4	R83	ERDS2TJ104	100K 1/4	R303	ERDS2TJ563	56K 1/4
R3	ERDS2TJ471	470 1/4	R101	ERDS2TJ102	1K 1/4	R304	ERDS2TJ563	56K 1/4
R4	ERDS2TJ471	470 1/4	R102	ERDS2TJ102	1K 1/4	R305	ERDS2TJ223	22K 1/4
R5	ERDS2TJ471	470 1/4	R103	ERDS2TJ102	1K 1/4	R306	ERDS2TJ223	22K 1/4
R6	ERDS2TJ471	470 1/4	R104	ERDS2TJ102	1K 1/4	R307	ERDS2TJ562	5.6K 1/4
R7	ERDS1FJ271	270 1/2	R105	ERDS2TJ102	1K 1/4	R308	ERDS2TJ562	5.6K 1/4
R8	ERDS1FJ271	270 1/2	R106	ERDS2TJ102	1K 1/4	R313	ERDS2TJ183	18K 1/4
R10	ERDS2TJ103	10K 1/4	R107	ERDS2TJ102	1K 1/4	R314	ERDS2TJ183	18K 1/4
R11	ERDS2TJ471	470 1/4	R108	ERDS2TJ102	1K 1/4	R315	ERDS2TJ334	330K 1/4
R12	ERDS2TJ332	3.3K 1/4	R109	ERDS2TJ222	2.2K 1/4	R316	ERDS2TJ334	330K 1/4
R13	ERDS2TJ103	10K 1/4	R110	ERDS2TJ222	2.2K 1/4	R317	ERDS2TJ683	68K 1/4
R14	ERDS2TJ104	100K 1/4	R111	ERDS2TJ102	1K 1/4	R318	ERDS2TJ683	68K 1/4
R15	ERDS2TJ103	10K 1/4	R112	ERDS2TJ102	1K 1/4	R319	ERDS2TJ272	2.7K 1/4
R16	ERDS2TJ272	2.7K 1/4	R113	ERDS2TJ104	100K 1/4	R320	ERDS2TJ272	2.7K 1/4
R17	ERDS2TJ332	3.3K 1/4	R114	ERDS2TJ103	10K 1/4	R321	ERDS2TJ563	56K 1/4
R18	ERDS2TJ332	3.3K 1/4	R115	ERDS2TJ154	150K 1/4	R322	ERDS2TJ563	56K 1/4
R19	ERDS2TJ3R9	3.9 1/4	R116	ERDS2TJ154	150K 1/4	R327	ERDS2TJ822	8.2K 1/4
R20	ERDS2TJ103	10K 1/4	R117	ERDS2TJ104	100K 1/4	R328	ERDS2TJ822	8.2K 1/4
R41	ERDS2TJ102	1K 1/4	R118	ERDS2TJ104	100K 1/4	R329	ERDS2TJ154	150K 1/4
R42	ERDS2TJ103	10K 1/4	R123	ERDS2TJ123	12K 1/4	R330	ERDS2TJ154	150K 1/4
R43	ERDS2TJ104	100K 1/4	R124	ERDS2TJ123	12K 1/4	R331	ERDS2TJ333	33K 1/4
R44	ERDS2TJ104	100K 1/4	R125	ERDS2TJ223	22K 1/4	R332	ERDS2TJ333	33K 1/4
R45	ERDS2TJ684	680K 1/4	R126	ERDS2TJ223	22K 1/4	R333	ERDS2TJ272	2.7K 1/4
R46	ERDS2TJ471	470 1/4	R127	ERDS2TJ104	100K 1/4	R334	ERDS2TJ272	2.7K 1/4
R47	ERDS2TJ471	470 1/4	R128	ERDS2TJ104	100K 1/4	R335	ERDS2TJ563	56K 1/4
R48	ERDS2TJ471	470 1/4	R129	ERDS2TJ103	10K 1/4	R336	ERDS2TJ563	56K 1/4
R49	ERDS2TJ471	470 1/4	R131	ERDS2TJ104	100K 1/4	R341	ERDS2TJ822	8.2K 1/4
R50	ERDS2TJ471	470 1/4	R132	ERDS2TJ104	100K 1/4	R342	ERDS2TJ822	8.2K 1/4
R51	ERDS2TJ471	470 1/4	R133	ERDS2TJ104	100K 1/4	R343	ERDS2TJ154	150K 1/4
R52	ERDS2TJ471	470 1/4	R134	ERDS2TJ104	100K 1/4	R344	ERDS2TJ154	150K 1/4
R53	ERDS2TJ471	470 1/4	R201	ERDS2TJ123	12K 1/4	R345	ERDS2TJ333	33K 1/4
R54	ERDS2TJ471	470 1/4	R202	ERDS2TJ123	12K 1/4	R346	ERDS2TJ333	33K 1/4
R55	ERDS2TJ471	470 1/4	R203	ERDS2TJ153	15K 1/4	R347	ERDS2TJ272	2.7K 1/4
R56	ERDS2TJ471	470 1/4	R204	ERDS2TJ153	15K 1/4	R348	ERDS2TJ272	2.7K 1/4
R57	ERDS2TJ471	470 1/4	R205	ERDS2TJ103	10K 1/4	R349	ERDS2TJ563	56K 1/4
R58	ERDS2TJ104	100K 1/4	R206	ERDS2TJ103	10K 1/4	R350	ERDS2TJ563	56K 1/4
R78	ERDS2TJ103	10K 1/4	R295	ERDS2TJ104	100K 1/4	R355	ERDS2TJ822	8.2K 1/4
R79	ERDS2TJ104	100K 1/4	R296	ERDS2TJ104	100K 1/4	R356	ERDS2TJ822	8.2K 1/4
R80	ERDS2TJ473	47K 1/4	R297	ERDS2TJ564	560K 1/4	R357	ERDS2TJ154	150K 1/4
			R298	ERDS2TJ564	560K 1/4	R358	ERDS2TJ154	150K 1/4

Ref. No.	Part No.	Value.
R359	ERDS2TJ333	33K 1/4
R360	ERDS2TJ333	33K 1/4
R361	ERDS2TJ272	2.7K 1/4
R362	ERDS2TJ272	2.7K 1/4
R363	ERDS2TJ563	56K 1/4
R364	ERDS2TJ563	56K 1/4
R366	ERDS2TJ394	390K 1/4
R368	ERDS2TJ123	12K 1/4
R369	ERDS2TJ822	8.2K 1/4
R370	ERDS2TJ822	8.2K 1/4
R371	ERDS2TJ154	150K 1/4
R372	ERDS2TJ154	150K 1/4
R373	ERDS2TJ273	27K 1/4
R374	ERDS2TJ273	27K 1/4
R375	ERDS2TJ152	1.5K 1/4
R376	ERDS2TJ152	1.5K 1/4
R377	ERDS2TJ563	56K 1/4
R378	ERDS2TJ563	56K 1/4
R383	ERDS2TJ822	8.2K 1/4
R384	ERDS2TJ822	8.2K 1/4
R385	ERDS2TJ154	150K 1/4
R386	ERDS2TJ154	150K 1/4
R387	ERDS2TJ333	33K 1/4
R388	ERDS2TJ333	33K 1/4
R389	ERDS2TJ821	820 1/4
R390	ERDS2TJ821	820 1/4
R391	ERDS2TJ563	56K 1/4
R392	ERDS2TJ563	56K 1/4
R397	ERDS2TJ682	6.8K 1/4
R398	ERDS2TJ682	6.8K 1/4
R399	ERDS2TJ124	120K 1/4
R400	ERDS2TJ124	120K 1/4
R401	ERDS2TJ273	27K 1/4
R402	ERDS2TJ273	27K 1/4
R403	ERDS2TJ681	680 1/4
R404	ERDS2TJ681	680 1/4
R405	ERDS2TJ683	68K 1/4
R406	ERDS2TJ683	68K 1/4
R407	ERDS2TJ103	10K 1/4
R408	ERDS2TJ103	10K 1/4
CAPACITORS(VALUE,VOLTAGE)		
122	ECKD1H151KB	150P 50
(EG)		
C1 ⚠	ECKD1H223PF	0.022 50
C2 ⚠	ECKD1H223PF	0.022 50
C3	ECEA1VU221	220 35
C4	ECEA1VU221	220 35
C5	ECEA1EK100	10 25
C6	ECEA1EK100	10 25
C7 ⚠	ECKD1H223PF	0.022 50
C8 ⚠	ECKD1H223PF	0.022 50
C9 ⚠	ECKD1H223PF	0.022 50
C10	ECEA1HU221	220 50
C11	ECEA1EU471	470 25
C12 ⚠	ECKD1H223PF	0.022 50
C13	ECEA1EK100	10 25
C14 ⚠	ECKD1H223PF	0.022 50
C15 ⚠	ECKD1H223PF	0.022 50
C16 ⚠	ECKD1H223PF	0.022 50
C17 ⚠	ECKD1H223PF	0.022 50
C18	ECEA1EK4R7	4.7 25
C19	ECFTD223KXL	0.022 25
C20 ⚠	ECKD1H223PF	0.022 50
C21	ECQV1H104JZ	0.1 50
C42	ECCD1H220K	22P 50
C43 ⚠	ECKD1H223PF	0.022 50
C44 ⚠	ECKD1H223PF	0.022 50
C45	ECKD1H102PF	0.001 50
C101	ECKD1H151KB	150P 50
(EG)		
C102	ECKD1H151KB	150P 50
(EG)		
C103	ECKD1H151KB	150P 50
(EG)		
C104	ECKD1H151KB	150P 50
(EG)		
C105	ECEA1EK4R7	4.7 25
C106	ECEA1EK4R7	4.7 25
C107	ECKD1H101KB	100P 50
C108	ECKD1H101KB	100P 50
C111	ECEA1CKS100	10 16
C112	ECEA1CKS100	10 16
C113	ECEA1HK3R3	3.3 50
C114	ECEA1HK3R3	3.3 50
C115 ⚠	ECKD1H223PF	0.022 50
C116	ECKD1H101KB	100P 50
C117 ⚠	ECKD1H223PF	0.022 50
C118 ⚠	ECKD1H223PF	0.022 50
C119	ECKD1H151KB	150P 50
(EG)		
C120	ECKD1H151KB	150P 50
(EG)		
C201	ECKD1H121KB	120P 50
C202	ECKD1H121KB	120P 50
C203	ECEA1HU470	47 50
C204	ECEA1HU470	47 50
C205 ⚠	ECKD1H223PF	0.022 50
C206 ⚠	ECKD1H223PF	0.022 50
C207	ECEA1HKR22	0.22 50
C208	ECEA1HKR22	0.22 50
C209	ECEA1HK010	1 50
C210	ECEA1HK010	1 50
C211	ECFTD823KXL	0.082 25
C212	ECFTD823KXL	0.082 25
C213	ECEA1HKR47	0.47 50
C214	ECEA1HKR47	0.47 50
C215	ECFTD333KXL	0.033 25
C216	ECFTD333KXL	0.033 25
C217	ECEA1HKR15	0.15 50
C218	ECEA1HKR15	0.15 50
C219	ECFTD153KXL	0.015 25
C220	ECFTD153KXL	0.015 25
C221	ECFTD683KXL	0.068 25
C222	ECFTD683KXL	0.068 25
C223	ECKD1H562KB	0.0056 50
C224	ECKD1H562KB	0.0056 50
C225	ECFTD273KXL	0.027 25
C226	ECFTD273KXL	0.027 25
C227	ECKD1H222KB	0.0022 50
C228	ECKD1H222KB	0.0022 50
C229 ⚠	ECFTD103KXL	0.01 25
C230 ⚠	ECFTD103KXL	0.01 25
C231	ECCD1H681K	680P 50
C232	ECCD1H681K	680P 50
C233	ECKD1H472KB	0.0047 50
C234	ECKD1H472KB	0.0047 50
C301	ECEA1HK010	1 50
C302	ECEA1HK010	1 50
C303	ECCD1H100KC	10P 50
C304	ECCD1H100KC	10P 50
C305	ECFTD393KXL	0.039 25
C306	ECFTD393KXL	0.039 25
C307	ECFTD393KXL	0.039 25
C308	ECFTD393KXL	0.039 25
C309	ECEA1HK010	1 50
C310	ECEA1HK010	1 50
C311	ECFTD333KXL	0.033 25
C312	ECFTD333KXL	0.033 25
C313	ECFTD333KXL	0.033 25
C314	ECFTD333KXL	0.033 25
C315	ECEA1HK010	1 50
C316	ECEA1HK010	1 50
C317	ECFTD123KXL	0.012 25
C318	ECFTD123KXL	0.012 25
C319	ECFTD123KXL	0.012 25
C320	ECFTD123KXL	0.012 25
C321	ECEA1HK010	1 50
C322	ECEA1HK010	1 50
C323	ECKD1H472KB	0.0047 50
C324	ECKD1H472KB	0.0047 50
C325	ECKD1H472KB	0.0047 50
C326	ECKD1H472KB	0.0047 50
C327	ECEA1HK010	1 50
C328	ECEA1HK010	1 50
C329	ECKD1H222KB	0.0022 50
C330	ECKD1H222KB	0.0022 50
C331	ECKD1H222KB	0.0022 50
C332	ECKD1H222KB	0.0022 50
C333	ECEA1HK010	1 50
C334	ECEA1HK010	1 50
C335	ECKD1H821KB	820P 50
C336	ECKD1H821KB	820P 50
C337	ECKD1H821KB	820P 50
C338	ECKD1H821KB	820P 50
C339	ECEA1HK010	1 50
C340	ECEA1HK010	1 50
C341	ECKD1H391KB	390P 50
C342	ECKD1H391KB	390P 50
C343	ECKD1H391KB	390P 50
C344	ECKD1H391KB	390P 50
C345	ECEA1HK010	1 50
C346	ECEA1HK010	1 50

•ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC1	AN78N05	I.C. REGULATOR
IC51	HD614042SH58	I.C. MICRO COM.
IC52	UPC393	I.C. BUFFER
IC53	LC74HC138	I.C. KEY CON.
IC54	M66310P	I.C. LED DRIVE
IC101	TC9162N	I.C. INPUT SELE.
IC102	NJM4559S	I.C. BUFFER
IC201	M5229P	I.C. EQ.
IC202	LC7522	I.C. BAND LEVEL
IC203	LC7522	I.C. BAND LEVEL
IC204	M5229P	I.C. EQ.
IC301	NJM4559S	I.C. B.P.F.
IC302	NJM4559S	I.C. B.P.F.
IC303	LA6324N	I.C. B.P.F.
IC304	LA6324N	I.C. B.P.F.
IC305	NJU4051BD	I.C. MIX
IC306	NJU4051BD	I.C. MIX
IC307	LA6324N	I.C. B.P.F.
TRANSISTORS		
Q1	2SD2012	TRANSISTOR
Q3	2SC3311A-Q	TRANSISTOR
Q4	DTA114ESTP	TRANSISTOR
Q41	DTA114ESTP	TRANSISTOR
Q42	DTA114ESTP	TRANSISTOR
Q43	DTA114ESTP	TRANSISTOR
Q44	DTA114ESTP	TRANSISTOR
Q45	DTA114ESTP	TRANSISTOR
Q46	DTA114ESTP	TRANSISTOR
Q47	DTA114ESTP	TRANSISTOR
Q48	DTA114ESTP	TRANSISTOR
Q49	DTA114ESTP	TRANSISTOR
Q50	DTA114ESTP	TRANSISTOR
Q52	DTC143TSTP	TRANSISTOR
Q55	2SC3311A-Q	TRANSISTOR
Q101	2SD1915T	TRANSISTOR
Q102	2SD1915T	TRANSISTOR
Q103	2SA1309Q	TRANSISTOR
Q201	2SD1915T	TRANSISTOR
Q202	2SD1915T	TRANSISTOR
DIODES		
D1	RL1N4003N02	DIODE
D2	RL1N4003N02	DIODE
D3	RL1N4003N02	DIODE
D4	RL1N4003N02	DIODE
D5	MA4150M	DIODE
D6	MA4150M	DIODE
D7	MA4075M	DIODE
D8	MA4075M	DIODE
D9	RL1N4003N02	DIODE
D11	RL1N4003N02	DIODE
D12	1SS178	DIODE
D13	1SS178	DIODE
D14	1SS178	DIODE
D15	1SS178	DIODE
D41	MA4062-M	DIODE
D42	MA162A	DIODE
D43	MA162A	DIODE
D44	MA162A	DIODE
D45	MA162A	DIODE
D46	MA162A	DIODE
D47	MA162A	DIODE
D48	MA162A	DIODE
D50	MA162A	DIODE
D51	BR2222S	DIODE
D52	BR2222S	DIODE
D53	BR2222S	DIODE
D54	BR2222S	DIODE
D55	BR2222S	DIODE
D56	BR2222S	DIODE

Ref. No.	Part No.	Description
D57	BR2222S	DIODE
D58	BR2222S	DIODE
D59	BR2222S	DIODE
D60	BR2222S	DIODE
D61	BR2222S	DIODE
D62	BR2222S	DIODE
D63	1SS178	DIODE
D301	1SS178	DIODE
D302	1SS178	DIODE
D303	1SS178	DIODE
D304	1SS178	DIODE
D305	1SS178	DIODE
D306	1SS178	DIODE
D307	1SS178	DIODE
D308	1SS178	DIODE
D309	1SS178	DIODE
D310	1SS178	DIODE
D311	1SS178	DIODE
D312	1SS178	DIODE
D313	1SS178	DIODE
D314	1SS178	DIODE
COILS AND TRANSFORMERS		
T1 ⚠	SLTK5K17	POWER TRANSFORMER
(EX. EH. EB)		
(EF. EI. EG)		
T1 ⚠	SLTK5K18	POWER TRANSFORMER
(EK. XL)		
T1 ⚠	SLTK5K19	POWER TRANSFORMER
(XB. XA. PA)		
(PE)		
COMPONENT COMBINATIONS		
Z51	EXBF10L795J	COMBINATION COM
Z52	EXBZ9E104J	CBMBINATION COM.
Z201	EXBF8E224J	COMPONENT COMBINATION
Z202	EXBF8E224J	COMPONENT COMBINATION
DISPLAYS		
FL1 Ⓚ	SADBG497ZSK	DISPLAY
FL2 Ⓢ	SADBG477ZSK	DISPLAY
SWITCHES		
S1 ⚠	SSHK81	SW. POWER
S2 ⚠	SSR187-1	SW. VOLTAGE SELECTOR
(XB. XA. PA)		
(PE)		
S41	SSGK7	SW
S42	SSGK7	SW
S43	SSGK7	SW
S44	SSGK7	SW
S45	SSGK7	SW
S46	SSGK7	SW
S47	SSGK7	SW
S48	SSG13	SW
S49	SSGK7	SW
S50	SSGK7	SW
S51	SSGK7	SW
S52	SSGK7	SW
S53	SSGK7	SW
S54	SSGK7	SW
S55	SSGK7	SW
S56	SSG13	SW
S57	SSGK7	SW
S58	SSGK7	SW
S59	SSGK7	SW
S60	SSGK7	SW
S61	SSGK7	SW
S62	SSGK7	SW
S63	SSGK7	SW
S64	SSG13	SW
S65	SSG13	SW
S66	SSGK7	SW
S67	SSGK7	SW

Ref. No.	Part No.	Description
S68	SSGK7	SW
S69	SSGK7	SW
S70	SSGK7	SW
S71	SSGK7	SW
S72	SSGK7	SW
S73	SSG13	SW
S74	SSG13	SW
S75	SSG13	SW. TAPE
S76	SSG13	SW. RECORDING
S77	SSG13	SW. SOURCE
S78	SSG13	SW. SPECTRUM
S79	SSG13	SW. EQ OFF
S80	SSG13	SW. S.ANALYSER
S81	SSG13	SW. EQ.ON
S82	SSG13	SW. EQ.LEVEL
S83	SSG13	SW. MEMORY
BATTERY		
BT1	BR2032-1VC	BATTERY
OTHERS		
X1	EF0FC4004A3	OSCILLATOR

•PACKING PARTS LIST

Ref. No.	Part No.	Description
PACKING MATERIAL		
P1 Ⓚ 〔EX, EH, EB〕 〔EI, EG, XL〕 〔XB, XA, PA〕 〔PE〕	SPGK371	PACKING CASE
P1 Ⓚ 〔EF〕	SPGK372	PACKING CASE
P1 Ⓚ 〔EK〕	SPGK373	PACKING CASE
P1 Ⓢ 〔EX, EH, EB〕 〔EI, EG, XL〕 〔XB, XA, PA〕 〔PE〕	SPGK384	PACKING CASE
P1 Ⓢ 〔EF〕	SPGK385	PACKING CASE
P1 Ⓢ 〔EK〕	SPGK386	PACKING CASE
P2	SPSK91-3	PAD
P3	SPSK92-3	PAD
P4	SPPK60	PROTECTION COVER
ACCESSORIES		
A1	SJPK2202-1	CORD
A2 ⚠ 〔XB, XA, PA〕 〔PE〕	RJP120ZBS-H	AC PLUG ADAPTOR
A3 ⚠ 〔EX, EH, EB〕 〔EF, EI, EG〕	SFDAC05E03	POWER CORD
A3 ⚠ 〔EK〕	SFDAC05G02	POWER CORD
A3 ⚠ 〔PA, PE〕	SJA168	POWER CORD
A3 ⚠ 〔XL〕	SJA173	POWER CORD
A3 ⚠ 〔XB〕	SJA183	POWER CORD
A3 ⚠ 〔XA〕	SJA185	POWER CORD
A4 〔EX, EH, EB〕 〔EF, EI〕	SQFK10204	INSTRUCTION BOOK
A4 〔EG〕	SQFK10205	INSTRUCTION BOOK
A4 〔EK, XL, XB〕 〔XA〕	SQFK10206	INSTRUCTION BOOK
A4 〔PA, PE〕	SQFK10207	INSTRUCTION BOOK
A5	SJP2257T	CORD

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ORDER NO.AD8805085A4

Service Manual

Equalizer

Stereo Graphic Equalizer

SH-8058

Color

(S) ....Silver Type	
(K) ....Black Type	

Area

Color	Area
(S)(K)	(PC) ....European Audio Club.

Please use this manual together with the service manual for Model No.SH-8058, Order No.HAD8803078C9.

The destination (PC) is the same as (XA) regarding the specifications, parts used, and all others. Accordingly,part Nos.in the (XA) column are applicable to (PC).

Technics

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